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                  Classification Data
 NEWS 11  FEB 02  Simultaneous left and right truncation (SLART) added
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 NEWS 12  FEB 02  GENBANK enhanced with SET PLURALS and SET SPELLING

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=> d l3 1-9 bib ab

L3   ANSWER 1 OF 9     MEDLINE on STN                    DUPLICATE 1
AN   2001443399     MEDLINE
DN   PubMed ID: 11489434
TI   Proteins from fish eggs that protect DNA from acid
     precipitation and inhibit DNA synthesis.
AU   Tsamis V; Mamuris Z; Panagiotaki P; Kouretas D
CS   School of Agriculture, University of Thessaly, Fitoko Neas Ionias, 38446,
     Magnisia, Greece.
SO   Comparative biochemistry and physiology. Toxicology & pharmacology : CBP,
     (2001 Aug) Vol. 129, No. 4, pp. 369-76.
     Journal code: 100959500. ISSN: 1532-0456.
CY   United States
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200110
ED   Entered STN: 13 Aug 2001
     Last Updated on STN: 29 Oct 2001
     Entered Medline: 25 Oct 2001
AB   We partially characterized proteins that inhibit DNA
     acid precipitation from various fish eggs (Sparus
     aurata, Dicentrarchus labrax, Mugil cephalus and Zeus faber).  The active
     proteins were purified by acetone fractionation.  The activity was found
     to be heat resistant.  Of bivalent cations tested only Co(2+) and Cu(2+)
     exerted a profound promoting effect in the activity from all fish.  The
     protein fraction from Sparus aurata inhibited DNA synthesis in PCR
     performed by different DNA polymerases.  The possible role of DNA
     protective proteins in fish egg physiology is discussed.
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L3 ANSWER 2 OF 9 MEDLINE on STN DUPLICATE 2
AN 1993371489 MEDLINE
DN PubMed ID: 8363650
TI 2',2'-Difluoro-deoxycytidine (gemcitabine) incorporation into RNA and DNA of tumour cell lines.
AU Ruiz van Haperen V W; Veerman G; Vermorken J B; Peters G J
CS Department of Oncology, Free University Hospital, Amsterdam, The Netherlands.
SO Biochemical pharmacology, (1993 Aug 17) Vol. 46, No. 4, pp. 762-6.
Journal code: 0101032. ISSN: 0006-2952.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA English
FS Priority Journals
EM 199309
ED Entered STN: 15 Oct 1993
Last Updated on STN: 3 Feb 1997
Entered Medline: 27 Sep 1993
AB Gemcitabine (dFdC) is a new cytidine analogue which is active mainly by the incorporation of its triphosphate (dFdCTP) into DNA, leading to cell death. We determined incorporation of dFdC into nucleic acids of two solid tumour cell lines: the murine colon carcinoma cell line Colon 26-10, the human ovarian carcinoma cell line A2780, and the human leukemic cell line CCRF-CEM. dFdC was not only incorporated into DNA, but also into RNA. The extent of incorporation into DNA was highest in A2780 cells and lowest in CCRF-CEM cells (2-4-fold difference). The same pattern was observed for incorporation into RNA, but with a 10-20-fold difference. In A2780, incorporation into DNA was about twice that of the incorporation into RNA, in CEM cells 10-20-fold that of RNA. Incorporation into RNA was verified using two methods for separation of RNA and DNA, acid precipitation and CsCl-gradient centrifugation. Incorporation into DNA was time and concentration dependent, but incorporation into RNA seemed to be only concentration dependent. We also determined the effect of dFdC on DNA and RNA synthesis by measurement of thymidine and uridine incorporation, respectively, using similar conditions as for the incorporation studies. In all three cell lines DNA synthesis was inhibited almost completely, even at 0.1 microM dFdC and at 4-hr exposure. RNA synthesis inhibition did not exceed 50% in both solid tumour cell lines, even at 1 microM dFdC exposure for 24 hr. A clear concentration effect was only observed in the CCRF-CEM cell line and only after 24 hr exposure. At a 1 microM dFdC exposure for 24 hr, RNA synthesis was completely inhibited in these cells. Incorporation of dFdC into RNA and inhibition of RNA synthesis represent an unrecognized but possibly important mechanism of action of this drug.

L3 ANSWER 3 OF 9 MEDLINE on STN DUPLICATE 3
AN 1990361061 MEDLINE
DN PubMed ID: 2167853
TI Escherichia coli DNA polymerase I: inherent exonuclease activities differentiate between monofunctional and bifunctional adducts of DNA and cis- or trans-diamminedichloroplatinum(II). An exonuclease investigation of the kinetics of the adduct formation.
AU Bernges F; Dorner G; Holler E
CS Institut fur Biophysik und physikalische Biochemie, Universitat Regensburg, Federal Republic of Germany.
SO European journal of biochemistry / FEBS, (1990 Aug 17) Vol. 191, No. 3, pp. 743-53.
Journal code: 0107600. ISSN: 0014-2956.
CY GERMANY, WEST: Germany, Federal Republic of
DT (COMPARATIVE STUDY)

Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA English
FS Priority Journals
EM 199010
ED Entered STN: 9 Nov 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 4 Oct 1990
AB [3H]dGMP-3'-labelled, activated salmon testis DNA and [32P]dGMP-5'-labelled open circular M13 DNA were reacted with cis-diamminedichloroplatinum(II), cis-diamminechloroaquaplatinum(II), cis-diammineidiaquaplatinum(II) or trans-diamminechloroaquaplatinum(II). The reaction was arrested after arbitrary times by adjustment to slightly alkaline solution conditions. The platinum-containing DNA was digested with Escherichia coli DNA polymerase I. The progress of nucleotide release was measured by acid precipitation of undigested DNA. Solubilized nucleotides and adducts were analyzed by HPLC. The 3'-5'-exonuclease activity liberated single-coordinated dGMP-platinum(II) adducts from both cis- and trans-platinum(II) treated salmon testis DNA and a small fraction of adducts of cis-platinum(II) that coordinated two molecules of dGMP. The bisadduct was derived from non-neighboring guanine residues probably located at or close to 3'-termini. This nuclease activity neither cut between nor after neighboring guanine residues crosslinked by cis-platinum(II). No bisadduct was liberated for trans-platinum(II). The 5'-3'-exonuclease activity did not liberate any nucleotide adducts from cis-platinum(II)-treated DNa. However, it removed single-coordinated guanine adducts of trans-diamminedichloroplatinum(II). From the kinetics of the appearance of dGMP monoadducts and the inhibition of digestion, a reaction scheme is formulated for the reaction of platinum(II) complexes with DNA that confirms and extends the previously published one [W. Schaller, H. Reisner & E. Holler (1987) Biochemistry 26, 943-950]. The longevity of the dGMP monoadduct intermediate is discussed in the context of the efficiency of cis-diamminedichloroplatinum(II) as an antitumor drug.

L3 ANSWER 4 OF 9 MEDLINE on STN DUPLICATE 4
AN 1990198233 MEDLINE
DN PubMed ID: 2698194
TI Rapid purification of plasmid DNA following acid precipitation of bacterial proteins.
AU Ziai M R; Hamby C V; Reddy R; Hayashibe K; Ferrone S
CS Dept. of Microbiology & Immunology, New York Medical College, Valhalla 10595.
NC AI21384 (United States NIAID)
CA37959 (United States NCI)
CA39559 (United States NCI)
SO BioTechniques, (1989 Feb) Vol. 7, No. 2, pp. 147.
Journal code: 8306785. ISSN: 0736-6205.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LA English
FS Priority Journals
EM 199005
ED Entered STN: 1 Jun 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 1 May 1990

L3 ANSWER 5 OF 9 MEDLINE on STN DUPLICATE 5

AN 1981068032 MEDLINE
DN PubMed ID: 6254859
TI Effects of delta-9-tetrahydrocannabinol on cultured HeLa cell growth and development.
AU Blevins R D; Smith D P
SO Growth, (1980 Jun) Vol. 44, No. 2, pp. 133-8.
Journal code: 0205044. ISSN: 0017-4793.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198102
ED Entered STN: 16 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 19 Feb 1981
AB Monolayer cultures of HeLa cells were used to monitor the effects of non-lethal concentrations of delta-9-tetrahydrocannabinol (delta-9-THC) on the pool sizes of the acid-soluble and acid-insoluble DNA moieties and cytoplasmic RNA pool sizes. The DNA fractions were separated using acid precipitation and low speed centrifugation, while the RNA was examined through the use of sucrose gradients and high speed ultracentrifugation. The ratio of acid-insoluble to acid-soluble DNA per cell in untreated HeLa cells is 16:1, which did not change appreciably following delta-9-THC treatment. However, cell division was retarded as much as 25% in the 24 hours treatment period indicating that nucleic acid synthesis, while not inhibited, is depressed by delta-9-THC. This is not related to cell death as indicated by cell viability (> 95%). At both 1.0 x 10(-5)M and 3.2 x 10(-7)M, delta-9-THC caused a marked change in the free ribosomal RNA (an increase with 3.2 x 10(-7)M and a decrease with the 10(-5)M), total ribosomal RNA (a decrease with both observed delta-9-THC concentrations) and non-sedimental RNA (an increase with both observed delta-9-THC concentrations).

L3 ANSWER 6 OF 9 MEDLINE on STN DUPLICATE 6
AN 1980120441 MEDLINE
DN PubMed ID: 530275
TI Histone: oxidation by peroxidase alters its interaction with DNA.
AU Gemant A
SO Molecular biology reports, (1979 Dec 31) Vol. 5, No. 4, pp. 257-60.
Journal code: 0403234. ISSN: 0301-4851.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198004
ED Entered STN: 15 Mar 1990
Last Updated on STN: 15 Mar 1990
Entered Medline: 23 Apr 1980
AB When histone is oxidized by peroxidase, its basicity (hence its complexing with DNA) is reduced: this reduction causes further alterations in the effect of histone upon the heat denaturation, acid precipitation, and breakdown by DNase of DNA, alterations which indicate that the regulation by histone of DNA expression may become abnormal. If oxidized species of histone should accumulate in the tissues in old age, the alteration mentioned might be a contributory factor of senescence.

L3 ANSWER 7 OF 9 MEDLINE on STN DUPLICATE 7
AN 1979083104 MEDLINE
DN PubMed ID: 365253
TI Relative rates of repair of single-strand breaks and postirradiation DNA

degradation in normal and induced cells of Escherichia coli.
AU Pollard E C; Fugate J K Jr
SO Biophysical journal, (1978 Nov) Vol. 24, No. 2, pp. 429-37.
Journal code: 0370626. ISSN: 0006-3495.
CY United States
DT (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LA English
FS Priority Journals
EM 197903
ED Entered STN: 14 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 29 Mar 1979
AB Labeled DNA from irradiated Excherichia coli cells has been studied on an alkaline sucrose gradient without acid precipitation of the DNA. This enables the observation of both DNA repair and DNA degradation. The use of a predose of ultraviolet light (UV) causes induction of an inhibitor of postirradiation DNA degradation in lex+ strains. The effect of this induction on both the repair of single-strand breaks and DNA degradation has been followed in strains WU3610 (uvr+) and WU3610-89 (uvr-). The repair process is more rapid than the degradation, and when degradation is inhibited more repair is apparent. Cells that are lex- (Bs-1 and AB2474) cannot be induced for inhibition of degradation. Nevertheless, by observation at short times repair can be seen clearly. This repaired DNA is degraded, suggesting that the signal for DNA degradation is not a single-strand break.

L3 ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1972:214508 BIOSIS
DN PREV197254044502; BA54:44502
TI A PROPOSED MODE OF ACTION OF ANTI TUMOR PLATINUM COMPOUNDS BASED UPON STUDIES WITH CIS DI CHLORO G TRITIATED DI PYRIDINE PLATINUM II.
AU HOWLE J A; GALE G R; SMITH A B
SO Biochemical Pharmacology, (1972) Vol. 21, No. 10, pp. 1465-1475.
CODEN: BCPCA6. ISSN: 0006-2952.
DT Article
FS BA
LA Unavailable

L3 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1967:13722 BIOSIS
DN PREV19674800013722; BA48:13722
TI Physio-histological studies on the physiological obesity of the meat pigs. VI. Especially on the mechanisms of the pancreatic fat necrosis fatty acid crystallization and focal pancreas necrosis.
AU ITIKAWA, OSAMU; HOSHINO, TADAHKO; ISHIDA, KAZUO; TAMATE, HIDEO; YONEYA, SADAMITSU; GOTO, KEKO
CS Fac. Agr., Tohoku Univ., Sendai, Jap.
SO TOHOKU J AG RES, (1965) Vol. 15, No. 4, pp. 295-317.
DT Article
FS BA
LA Unavailable
ED Entered STN: May 2007
Last Updated on STN: May 2007
AB Physio-histological studies on the mechanism of adipositas and the effect of fattening was investigated histochemically on the various organs of Yorkshire pigs used for the experiment of the feeding standard on the meat pigs. The present study described the occurrence of the fat-necrosis, fatty acid crystalization and focal necrosis in the pancreas of the meat pigs. Focal necrosis in the pancreatic acinar area is characterized

histologically and histochemically by karyolytic processes with the nuclear frag me ntationand depolymerizationof DNA [deoxyribonucleic acid], aggregation of zymogen granules, and decrease of protein in the cytoplasm. There are nopancreatitis in the swine pancreas. There is only pancreatic necrosis localized inthe peripancreatic interlobularand intera-cinararea. The pancreatic ducts had inspissated secretion in them, rupture of the interlobuiar connective tissue around them, outflow of the inspissated materials into the acinar lobuli, the isolation of the acinar cells within the inspissated materials, remarkable fat degeneration of the acinar cells or Langerhans's islet inthe acinar lobuli, destruction of the acinar cells with the zymogengranules, the aggregates of the isolated zymogen-granules with in the inspissatedpancreatic fluids, and fat deposition inthe center of the acinar lobulienveloped wi th the necrotic acinar cells. There is a remarkable growth of the sympathetic ganglion cells and parasy mpathetic myellnatedfibers inthe interlobuiar connective tissues of the swine pancreas. The nervous system inthe swine pancreas develops remarkably more than that inthe other animals. These were mistaken inthe organized thrombi and angitis obliterans. Fatty substances in the fat necrosis consisted of cholesterol, lipids andfatty acid. The pancreatic fat necrosis consisted of 3 types; needle-like crystal containing principally fatty acid and few neutral fat, granular form involving fattyacid,neutral fat, cholesterol and few phospholipids, and homogeneous form including abundant cholesterol, few phospholipids and no fatty acid. Fatty substances inthe fat necrosis contained the granules, chain-like rods stained with FAS [paraamino-policylicacid] acid reaction for polysaccharides, with acrolein Schiff reaction, for protein, and in some cases stained faintly with Feulgen reaction for DNA. These mucoprotein-like substances originated from the isolated degenerative zymogen granules in the destructive acinar area within the inspissated pancreatic fluid. In the sympathetic nerve and fat deposition in the damaged liver, protein synthesis and lipoprotein formation was inhibited and the triglyceride accumulation resulted in the liver. The endoplasmic reticulum played a role in the lipid secretory mechanism and became damaged very soon after the intoxication. This damage occured at a time when fat accumulate to the liver. If focal necrosis would occur in the pancreatic acinar area by the inspissated secretion in the pancreatic ducts,rupture of the interlobuiar connective tissue around them, and outflow of the inspissated materials from them to the acinar lobuli; the protein synthesis and lipoprotein formation might be inhibited. Fat might be accumulated to the pancreas by the stimulation of the sympathetic nerve as well as the above mentioned biochemical theories in the fat liver. Focal pancreatic necrosis developed to the fat necrosis and fatty acid crystalization in the destructive pancreatic acinus by the overflow to the inspissated pancreatic fluid. The present report described the morphologically, the biochemical studies on the mechanism of fat deposition by the sympathetic nerve regulation. ABSTRACT AUTHORS: Authors

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L5 ANSWER 1 OF 6 MEDLINE on STN DUPLICATE 1
AN 1998178016 MEDLINE
DN PubMed ID: 9546945
TI Changes in the amplitude of cyclic load biphasically modulate endothelial cell DNA synthesis and division.
AU Upchurch G R Jr; Loscalzo J; Banes A J
CS Department of Surgery, Brigham and Women's Hospital, Harvard University, Boston, MA 02115, USA.
NC AR38121 (United States NIAMS)
SO Vascular medicine (London, England), (1997) Vol. 2, No. 1, pp. 19-24. Journal code: 9610930. ISSN: 1358-863X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LA English
FS Priority Journals; Space Life Sciences
EM 199804
ED Entered STN: 22 Apr 1998
Last Updated on STN: 22 Apr 1998
Entered Medline: 14 Apr 1998
AB Several physical factors, including shear stress and cyclic load, modulate the ability of endothelial cells to respond to injury. The objective of these experiments was to test the hypothesis that cyclic mechanical load stimulates endothelial cell DNA synthesis and division in vitro. Rabbit aortic endothelial cells were cultured on Flex I flexible-bottomed culture plates, and subjected to load amplitudes of increasing magnitude (0, 0.18, 0.24 and 0.27 load at 1 Hz) using a Flexercell strain unit. Cells were harvested enzymatically and cell numbers determined on days 1, 3 and 5 after initiating the load regimen. DNA synthesis was quantified after trichloroacetic acid precipitation of [3H]thymidine-labeled cells from: (1) whole culture wells and (2) areas of minimum and maximum strain in culture cells. Data were analyzed using analysis of variance and a Tukey's test (n = 6 observations/strain regimen per day in triplicate). Results from analysis of endothelial cells in whole, subconfluent cultures showed that cells subjected to strains of 0.18 had a decreased rate of cell division (76% of control) and DNA synthesis (63% of control), while cells subjected to strains of 0.24 and 0.27 had an increased rate of cell division (108 and 83% increase, respectively, compared with control; $p < 0.001$) and DNA synthesis (39 and 172% increase, respectively, compared with control; $p < 0.001$ for 0.27) on day 3 when compared with control cells. The results indicate that endothelial cells respond to various physiologic levels of cyclic load in a biphasic manner to initiate DNA synthesis and cell division. These data suggest that endothelial cell mitogenesis may be modulated by specific levels of cyclic load.

L5 ANSWER 2 OF 6 MEDLINE on STN DUPLICATE 2
AN 1987185826 MEDLINE
DN PubMed ID: 3032306
TI Fate of the DNA in plasmid-containing Escherichia coli minicells ingested by human neutrophils.
AU Fox H B; De Togni P; McMahon G; Levy S B; Robinson J S; Karnovsky M J; Babior B M

NC AI-11827 (United States NIAID)
AI-17945 (United States NIAID)
AI-24227 (United States NIAID)
SO Blood, (1987 May) Vol. 69, No. 5, pp. 1394-400.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198706
ED Entered STN: 3 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 5 Jun 1987
AB Escherichia coli minicells containing the plasmid pSC101 (approximately 10 kb) or pBR322 (approximately 4 kb) were opsonized and incubated with human neutrophils. The neutrophils responded to the minicells as they would to native E coli: they ingested the minicells, discharged their granule contents into the minicell-containing phagosomes, and expressed a respiratory burst. After one hour of incubation, the fate of the ingested plasmid DNA was examined. No DNA degradation was detected by trichloroacetic acid precipitation or agarose gel electrophoresis. Moreover, when pBR322 recovered from ingested minicells was transformed into E coli, no mutations in either of the antibiotic resistance genes carried by the plasmid were detected out of many thousand transformants screened. These findings confirm the surprisingly limited effect of neutrophils on ingested DNA.

L5 ANSWER 3 OF 6 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1983:173481 BIOSIS
DN PREV198375023481; BA75:23481
TI COMPARISON OF DIFFERENT METHODS OF RECOVERING DNA FROM A METHYLATION ASSAY.
AU PFOHL-LESZKOWICZ A [Reprint author]; DIRHEIMER G
CS LAB DE TOXICOL BIOL MOL, INST DE BIOL MOLECULAIRE CELLULAIRE DU CNRS, UNIV LOUIS PASTEUR, 15 RUE DESCARTES, 67-84 STRASBOURG, FR
SO Biochimie (Paris), (1982) Vol. 64, No. 4, pp. 293-296.
CODEN: BICMBE. ISSN: 0300-9084.
DT Article
FS BA
LA ENGLISH
AB Several enzymes, e.g., DNA (cytosine-5-)-methyltransferase, produce relatively strong interactions with DNA and hinder the quantitative recovery of this DNA from a reaction mixture. Classical methods like the Sevag chloroform-isoamylic alcohol or the phenol procedure lead only to a 50-60% recovery of the DNA. A new procedure was worked out utilizing pancreatic RNase, proteinase K, NaOH 0.5 M treatment and trichloroacetic acid precipitation which gives 85% recovery of DNA [Escherichia coli, chicken erythrocyte].

L5 ANSWER 4 OF 6 MEDLINE on STN DUPLICATE 3
AN 1981160675 MEDLINE
DN PubMed ID: 7011371
TI Identification of the cis-thymine glycol moiety in oxidized deoxyribonucleic acid.
AU Frenkel K; Goldstein M S; Duker N J; Teebor G W
NC CA 09161 (United States NCI)
CA 16669 (United States NCI)
CA 24103 (United States NCI)
+

SO Biochemistry, (1981 Feb 17) Vol. 20, No. 4, pp. 750-4.
Journal code: 0370623. ISSN: 0006-2960.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LA English
FS Priority Journals
EM 198106
ED Entered STN: 16 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 23 Jun 1981
AB 5,6-Dihydroxy-5,6-dihydrothymine (thymine glycol) is formed in DNA by reaction with oxidizing agents and as a result of ionizing and near-ultraviolet radiation. We describe a rapid purification of cis-5,6-dihydroxy-5,6-dihydrothymine and cis-5,6-dihydroxy-5,6-dihydrothymidine (cis-thymidine glycol) and their use as markers in identifying the thymine glycol moiety in oxidized DNA. Both glycols were prepared by oxidation of [14C]thymine and -thymidine with KMnO4 followed by purification on Sephadex LH-20 (LH-20). [3H]DNA was oxidized with KMnO4 and the thymidine glycol in DNA identified by enzymatic digestion of the DNA followed by cochromatography of the digest with marker [14C]thymidine glycol on LH-20. The cis conformation of the glycol was confirmed by the change in the elution pattern when borate rather than water was used as eluent. Alkaline hydrolysis of a mixture of [14C]thymine glycol and oxidized [3H]DNA followed by trichloroacetic acid precipitation and LH-20 chromatographic analysis of the neutralized supernatant yielded a complex pattern of radioactive degradation products with coincidence of one 14C marker- and one [3H]-DNA-derived peak. All applied radioactivity was recovered. This methodology should be useful in determining thymine glycol content of irradiated DNA and in elucidating the mechanism by which these altered residues are removed from cellular DNA by repair enzymes.

L5 ANSWER 5 OF 6 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
AN 1978318884 EMBASE
TI DNA repair capacity in the general population and in opiate addicts.
AU Madden, J.J.; Falek, A.; Shafer, D.
CS Emory Univ. Sch. Med., Atlanta, Ga. 30306, United States.
SO Journal of Supramolecular and Cellular Biochemistry, (1978) Vol. Suppl. 2, pp. No. 233.
CODEN: JSPMAW
CY United States
DT Journal
FS 037 Drug Literature Index
040 Drug Dependence, Alcohol Abuse and Alcoholism
LA English
AB Previous studies on genetic damage in opiate addicts have been limited to identification of unstable chromosome aberrations. We have evaluated DNA repair mechanisms in heroin addicts, methadone maintenance patients, and control subjects to see if opiates might induce stable mutations by acting at this biochemical level. DNA repair capacity was quantitated in peripheral lymphocyte cultures by stressing the cells with known mutagens including far UV, 8-methoxypsoralen + near UV, mitomycin C, and ethyl methanesulfonate, and by measuring the increase in the sister chromatid exchange frequency cytologically and in unscheduled DNA synthesis. Unscheduled DNA synthesis was assayed by DNA extraction and perchloric acid precipitation, and also by sodium iodide isopycnic centrifugation. While the average response of the 100+ control subjects to far UV stress agreed closely with the saturation value (20J/m(2)) reported by Ahmed and Setlow (Proc. Nat. Acad. Sci. 74 1548

(1977) and others, the range of response was extraordinary, extending from practically zero to 10-fold greater capacity than average. A similar pattern was found in response to the chemical mutagens. This variation in DNA repair capacity in a 'normal' population has important implications for humans at both the genetic and environmental levels. The 12 opiate addicts studied thus far have a drastically reduced level of unscheduled DNA synthesis, and experiments are in progress to confirm the significance of this result.

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AN 1976148063 EMBASE
TI [Incorporation of tritiated thymidine in rat liver DNA: critical study of the different evaluation methods].
INCORPORATION DE LA THYMIDINE TRITIEE DANS LE DNA DE FOIE DE RAT: CRITIQUE DES DIFFERENTES METHODES D'EVALUATION.
AU Berneman, A.; Lenfant, M.; Lambiotte, M.
CS Inst. Chim. Subst. Naturelles, CNRS, Gif sur Yvette, France.
SO Biochimie, (1975) Vol. 57, No. 6-7, pp. 773-777.
ISSN: 0300-9084 CODEN: BICMBE
DT Journal
FS 023 Nuclear Medicine
029 Clinical and Experimental Biochemistry
LA French
AB The incorporation is measured of (3)H (methyl) thymidine by cell cultures of rat fetal liver and in vivo by the livers of young rats stimulated by casein, in order to compare three methods for the extraction of DNA: perchloric acid precipitation, trichloroacetic acid precipitation and phenol extraction, and its specific activity was determined. The radioactive labelling was also determined for the lipid, ribonucleic acid and protein fractions for the two first methods, in both of which 70% of the incorporated tritium was found in the DNA fraction and about 10% in each of the other fractions. Since larger yields were obtained by both acid precipitation techniques than by phenol extraction, they may be more suitable for studies on cell cultures.